

From August 6th to 10th we were at Château Queyras. We did no climbing but spent our days in the valley and on the lower slopes of the hills near the village. *Erebia neoridas* occurred all round in small numbers, all males and newly emerged. *Klugia spini* was common, with large fresh ♀s. *Coenonympha dorus* seemed to be rare, for the few I took of both sexes were quite good. There were no Vanessids and hardly any Pierids. Hesperids were not common. I got *Hesperia alveus* and *H. fritillum*, *H. carthami* and *Powellia sao*. Of the blues *Hirsutina damon* and *Agriades coridon* were abundant, *Polyommatus escheri* was common with very fine ♀s, *P. hylas* was just coming out, *P. icarus* and *Aricia medon (agestis)* were generally distributed. *Argynnis adippe* was common and fine, as also was *Issoria lathonia*. *Melitaea didyma*, *M. phoebe* and worn *M. athalia* were all of their genus. Towards Abriès *Satyrus cordula* was common and many in good order; *Epinephele lycaon* was abundant everywhere. On August 10th I took two *Nordmannia acaciae*, a little past their prime.

On August 11th we walked to Guillestre through the gorges of the Guil Valley. Two miles below Château Queyras *Erebia neoridas* was common and when the valley opened out a little the butterfly abounded on the lavender covered slopes. They constantly settled on the hot rocks, and less frequently at the flowers. Near Guillestre *Hipparchia briseis* turned up again and *Coenonympha dorus*. Between that place and the station *Epinephele tithonus* was common.

On our last day, August 12th, we spent a long morning at Clelles. Butterflies were abundant. *Satyrus circe* was worn and *S. alcyone* more so. *Epinephele jurtina* was in thousands. *Agriades coridon* was much commoner than a fortnight before, with plenty of ♀s. *Melitaea cinxia* and *M. parthenic*, both second brood, were just coming out. On the rough ground between the station and the viaduct *Hipparchia briseis* was common, males and females, and in fine order. Down by the stream *Erebia aethiops* was just out, and *E. neoridas* on the edge of the thickets above.

So ended a month of sunshine snatched from perhaps the worst English year since 1877 or 1878. Altogether we took, or identified without taking, 108 species of butterflies.

Experiments on the capability of Ants to withstand drought and to recover from its effects when nearly dead.

By C. C. BEST GARDNER.

The following experiments were carried out in a room above the kitchen, which is furnished with a ventilator leading into the chimney, it is an exceedingly dry room. The windows and door were kept shut and the fire was not lit during the experiments. The ants were first placed in open upright test-tubes, which were too slippery for them to climb, and were subsequently removed and placed in a damp plaster nest, whilst there were still distinct signs of life. There were no other ants in the nest, so that when they recovered they did so unaided. Honey was placed in the nest. The ants used in the experiments were taken at random from healthy nests. Each ant was placed in a separate test-tube.

GENERAL NOTES.—I find that all the ants experimented on remained apparently unchanged until within about twelve hours or less of the

REFER- ENCE.		PLACED IN TUBE.		TEMPERATURE WHILE IN TUBE.	TIME IN TUBE.		PLACED IN DAMP NEST.		RESULT.
		DEC.	TIME.		HRS.	MIN.	DEC.	TIME.	
A	<i>Formica fusca</i>	..	..	53 to 56	111	0	14th	9.0 a.m.	failed to recover.
B	<i>Lasius flavus</i>	..	..	55 to 56	25	10	10th	7.40 p.m.	failed to recover.
C	<i>Myrmica laevinodis</i>	..	..	55 to 56	27	50	10th	10.30 p.m.	recovered after 3 days.
D	<i>Myrmica ruginodis</i>	..	..	55 to 56	37	45	11th	8.30 a.m.	doubtful.
E	<i>Formica fusca</i>	..	..	50 to 58	64	20	17th	2.20 p.m.	failed to recover.
F	<i>Myrmica laevinodis</i>	..	..	55 to 58	35	15	16th	9.15 a.m.	recovered after 60 hrs.
G	<i>Myrmica ruginodis</i>	..	..	55 to 58	35	15	16th	9.15 a.m.	recovered after 84 hrs.
H	<i>Lasius flavus</i>	..	..	55 to 58	35	15	16th	9.15 a.m.	recovered after 150 hrs.
I	<i>Myrmica laevinodis</i>	..	..	50 to 54	29	5	17th	2.20 p.m.	recovered after 115 hrs.
J	<i>Myrmica ruginodis</i>	..	..	50 to 54	37	45	17th	11.0 p.m.	recovered after 16 hrs.
K	<i>Lasius flavus</i>	..	..	50 to 54	28	0	17th	1.15 p.m.	recovered after 5 hrs.
L	<i>Myrmica scabrinodis</i>	..	..	50 to 51	45	10	19th	mid-day.	recovered after 68 hrs.
M	<i>Myrmica scabrinodis</i>	..	..	50 to 51	52	25	19th	7.15 p.m.	recovered after 124 hrs.
N	<i>Myrmica scabrinodis</i>	..	..	50 to 51	31	55	18th	10.45 p.m.	recovered after 16 hrs.
O	<i>Formica fusca</i>	..	..	50 to 51	34	15	19th	9.15 a.m.	recovered after 30 hrs.

end, when they sank rapidly. Also when removed to the damp-nest they remained for a considerable time in the same state, but once recovery began it was rapid. In some cases they remained for over two days in this inert state before they showed signs of recovering, yet on the third day they were quite lively. I find that they are all more or less paralysed in the antennæ, this part being, as a rule, the last to recover; indeed, the whole of the front portion of the ant seems to break down, one ant (J) which had been in the damp nest for 16 hours could make little use of its front left leg, yet the rest of its anatomy seemed to be in order; again, another ant (E) which had been in the damp nest for over 24 hours seemed to have lost the use of the whole of the front portion of its body, its head was doubled up under it, and when it moved it did so by pushing with its hindlegs. I also noticed that when the end is drawing near, their hindlegs are stuck up straight in the air (I have sometimes noticed the same thing with ants killed in laurel) Somewhat similar experiments are referred to by Miss A. M. Field in an article in the *Biological Bulletin*, vol. 8, No. 6, 1904, pp. 300-309, and in the same publication No. 3, 1904, pp. 170-174.

NOTES ON INDIVIDUAL ANTS.—**A**.—This ant certainly ought to have been removed at least 15 hours before it was, when I think it might have recovered, I was away at the time and believe the ant was dead some considerable time before its removal.

D.—This Ant is of particular interest, it partially recovered after being three days in the damp nest, the nest was then again damped, by being placed in a plate containing water, when the ant started to behave as though in pain, wildly waving its legs and rolling about (**C**. which was in the nest at the same time, remained motionless). It was then noticed that both antennæ were sharply bent at the elbow, thus **L**, and that it had apparently lost the use of them, also nearly the whole of the top of the abdomen was caved in. I then clipped its spines (in doing which I fear I must have injured it) and placed it back in its own nest, two days after I was unable to ascertain whether it was alive or not, but for the last two days an ant had apparently got hold of it where its spines were, but did not attempt to carry it about. On the morning of the 17th I found it stretched out on its back, dead, with no ant attending it. On the 16th the abdomen was tucked up under it, so I conclude it must have then been alive. The right antenna had straightened out, but the left remained as before, and the dent in the abdomen was the same.

K.—I think the very quick recovery of this ant (for after being in the damp nest for five hours it was quite lively) shows that it could have remained some time longer in the tube and still have recovered.

G.—This ant suddenly recovered from being nearly dead to a very lively state. The difference in the time that this ant and its nest mate (**J**) took to recover should be noted.

E.—This ant died on the morning of the 23rd.

F.—When this ant was removed from the tube it showed no visible signs of life.

SOCIETIES.

ENTOMOLOGICAL SOCIETY OF LONDON.—*October 16th, 1912.*—The following were elected Fellows of the Society:—Mrs. E. M. Waterfield,